



# SPEC® CINT2006 Result

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## Cisco Systems

Cisco UCS C240 M3 (Intel Xeon E5-2630L v2, 2.40 GHz)

SPECint®\_rate2006 = 463

SPECint\_rate\_base2006 = 446

CPU2006 license: 9019

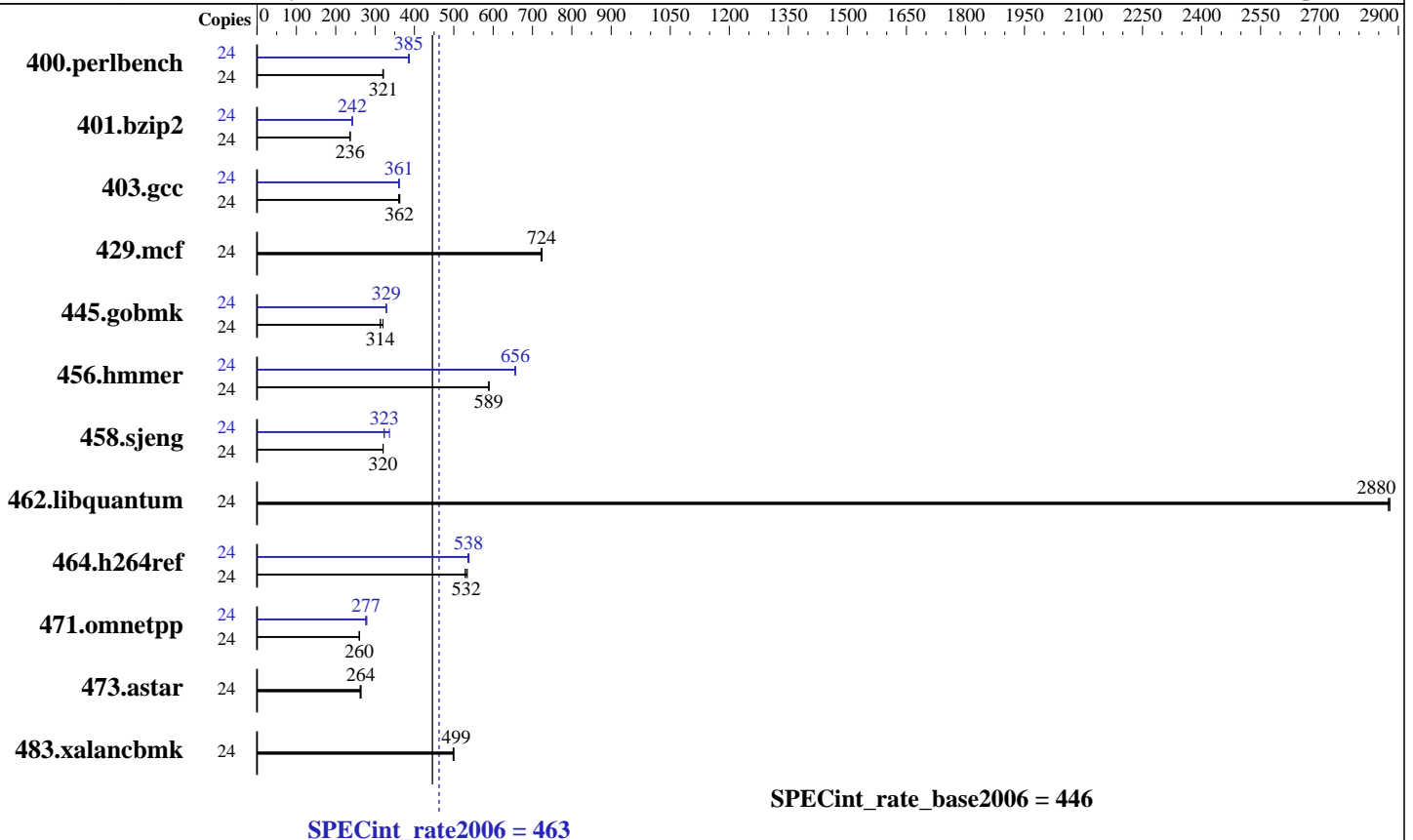
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Dec-2013

Hardware Availability: Dec-2013

Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E5-2630L v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC, running at 1600 MHz and CL11)  
 Disk Subsystem: 1 X 300 GB 15000 RPM SAS  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
 2.6.32-358.el6.x86\_64  
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	734	320	731	321	<b>731</b>	<b>321</b>	24	<b>609</b>	<b>385</b>	609	385	605	387
401.bzip2	24	983	236	<b>980</b>	<b>236</b>	976	237	24	<b>956</b>	<b>242</b>	956	242	959	242
403.gcc	24	532	363	<b>534</b>	<b>362</b>	537	360	24	534	362	<b>536</b>	<b>361</b>	537	360
429.mcf	24	<b>303</b>	<b>724</b>	303	722	302	724	24	<b>303</b>	<b>724</b>	303	722	302	724
445.gobmk	24	<b>803</b>	<b>314</b>	803	313	787	320	24	767	328	<b>766</b>	<b>329</b>	766	329
456.hammer	24	<b>380</b>	<b>589</b>	380	590	380	589	24	341	657	342	655	<b>341</b>	<b>656</b>
458.sjeng	24	907	320	906	321	<b>907</b>	<b>320</b>	24	863	336	900	323	<b>898</b>	<b>323</b>
462.libquantum	24	173	2870	173	2880	<b>173</b>	<b>2880</b>	24	173	2870	173	2880	<b>173</b>	<b>2880</b>
464.h264ref	24	994	534	<b>998</b>	<b>532</b>	1004	529	24	986	539	<b>987</b>	<b>538</b>	991	536
471.omnetpp	24	576	261	578	260	<b>577</b>	<b>260</b>	24	<b>542</b>	<b>277</b>	537	279	543	276
473.astar	24	643	262	<b>639</b>	<b>264</b>	637	264	24	643	262	<b>639</b>	<b>264</b>	637	264
483.xalancbmk	24	331	500	332	498	<b>332</b>	<b>499</b>	24	331	500	332	498	<b>332</b>	<b>499</b>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

### BIOS Settings:

```

Intel HT Technology = Enabled
CPU performance set to HPC
Power Technology set to Custom
CPU Power State C6 set to Enabled
CPU Power State C1 Enhanced set to Disabled
Energy Performance policy set to Performance
Memory RAS configuration set to Maximum Performance
DRAM Clock Throttling Set to Performance
LV DDR Mode set to Performance-mode
DRAM Refresh Rate Set to 1x
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on C240M3 Wed Dec 18 14:22:50 2013

```

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

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### Platform Notes (Continued)

<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo

model name : Intel(R) Xeon(R) CPU E5-2630L v2 @ 2.40GHz

2 "physical id"s (chips)

24 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

cpu cores : 6

siblings : 12

physical 0: cores 0 1 2 3 4 5

physical 1: cores 0 1 2 3 4 5

cache size : 15360 KB

From /proc/meminfo

MemTotal: 132125228 kB

HugePages\_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb\_release -d

Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/\*release\* /etc/\*version\*

redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

system-release-cpe: cpe:/o:redhat:enterprise\_linux:6server:ga:server

uname -a:

Linux C240M3 2.6.32-358.el6.x86\_64 #1 SMP Tue Jan 29 11:47:41 EST 2013 x86\_64 x86\_64 x86\_64 GNU/Linux

run-level 3 Dec 18 14:01

SPEC is set to: /opt/cpu2006-1.2

Filesystem Type Size Used Avail Use% Mounted on

/dev/sda1 ext4 275G 52G 210G 20% /

Additional information from dmidecode:

BIOS Cisco Systems, Inc. C240M3.1.5.3b.0.082020130616 08/20/2013

Memory:

16x 0xAD00 HMT31GR7EFR4C-RD 8 GB 1600 MHz 2 rank

8x NO DIMM NO DIMM

(End of data from sysinfo program)

### General Notes

Environment variables set by runspec before the start of the run:

LD\_LIBRARY\_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64:/opt/cpu2006-1.2/sh"

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## General Notes (Continued)

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled  
Filesystem page cache cleared with:  
echo 1> /proc/sys/vm/drop\_caches  
runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>

## Base Compiler Invocation

C benchmarks:  
icc -m32  
  
C++ benchmarks:  
icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
  
C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/sh -lsmartheap

## Base Other Flags

C benchmarks:  
  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32

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## Peak Compiler Invocation (Continued)

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:  
icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-auto-ilp32

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll4 -auto-ilp32

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## Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130717.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130717.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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